B O R O U G H OF B L Y T H

A N N U A L H E A L T H R E P O R T

for 1943

by

A. G. NEWELL, M.D., C.M., L.M., D.P.H.
MEDICAL OFFICER OF HEALTH

February, 1944.
Public Health Department,
Wellington House,
B L Y T H,
Northumberland.

BOROUGH OF BLYTH

Annual Report on the Health of the Borough and on the work of the Health Department for the year 1943 by the Medical Officer of Health

Your Worship, Madam and Gentlemen:-

It is rare for one Medical man to sign a report like this, in which four Medical Officers of Health are concerned. From January to July 10th, Dr. Stokoe was in charge till he was called up for war service; from July 10th to 25th September, Dr. Duncan was in charge, and signed last year's report; from his departure to the 31st of October, you had Dr. Clarke as locum from the County Council; I joined on the 1st November.

Each individual looks at his work from different standpoints, and assesses the subdivisions with a different measurement, so it is natural each has a trend to carry out his duties in a manner of his own for the public benefit. I have, singly handed, made out a programme of work (see appendix) to cover all the spheres of work without missing any. Each has its own interest, and they possess important values. The various statistics should be pursued, as they are instructive and speak for themselves. I have, under separate sections, commented upon certain important subjects of preventive medicine so as to remove ambiguity concerning many points, and more especially concerning Diphtheria. By putting facts before my Councillors, I trust to gain their co-operation in the abatement of this terrible disease and save life. Only 56 per cent of the children under five years of age have been immunised to date, and only 26.4 per cent completed in 1943 of the estimated population under five years of age.

The housing question is serious in several respects, the chief points being (1) slum conditions, (2) shortage, (3) licences to relet houses unfit for human habitation, (4) overcrowding, (5) demand for transferences from one unsanitary dwelling to another presumed less unsanitary, (6) existence of some unfinished new buildings. My recommendations in connection with this, your most urgent problem of all, are that you request the Minister of Health to give immediate priority for building materials to (a) finish houses which have been left uncompleted, (b) to make habitable the best of the houses in slum clearance areas, (c) to make habitable those houses from which persons have been taken to either (a) or (b). The landlords may be given the option to do the necessary works themselves, or, if they prefer (or won't do them) the Borough Council should renovate and collect the rents. It will be some years before we can tackle the problem adequately, and I regard the disgraceful conditions under which many people are living - and to whom, at present, you can give no relief - justify an immediate demand from the Minister of Health to acquiesce in this solution. The future generation demand some hope from the miserable conditions. You cannot build a brighter Britain on such rotten foundations. "Man's inhumanity to man makes countless thousands mourn."

The general health is satisfactory, considering the conditions enforced on the people by war. The school age shows the highest number of infectious diseases. The statistics show an increase in cases of tuberculosis, Pneumonia (mainly influenzal), Scarlet Fever and Whooping Cough over those for 1942, and a steady increase of Cancer over thirty years. Of these infectious diseases, Tuberculosis and Pneumonia are each higher than any year since 1936. Over a period of eight years, the highest percentage of deaths is from Tuberculosis.

The main death rates are in the ages of 5 - 15 years, and these are the years in which infection in schools has its greatest influence. This points to drastic action against possible causes. Summarised, you must make every endeavour (a) to have all school children immunised against Diphtheria, (b) the floors of schools, a virulent source of infection, to be more regularly and thoroughly cleansed, (c) that there is adequate ventilation in the school rooms at all times, (d) that a reliable thermometer is kept in each school room, which must

not be overheated.

I am pleased to record that there is, so far, no evidence of lowered nutrition among school children directly due to war conditions.

The appendices show the work done by the various members of the staff.

I have had a table made, which shows the death rates among infants and among the main infectious diseases during the two war-periods from which you will see we have a general lowered rate among these during the present war-period.

I desire to thank the various heads of Departments for their kindly help.

I remain,

Your Worship, Madam and Gentlemen,

Your Obedient Servant,

A. G. NEWELL,

Medical Officer of Health.

1943 Deaths (Including Transferable)

Cause of Death.	1943 Annual Report Figures.	Transferable Deaths for Quater ending 31/12/43.	Total for Year.
Heart & Circulatory	135	6	141
Zymolic Diseases:-			
Diphtheria 3) (Transferred)		–	
Pneumonia 25)		8	
E.C.S.M. 2)		–	
Why. Cough 1)		–	
Measles 1)	32	–	40
Cancer	50	2	52 (Female)(1 breast - 1 Colon)
Violence:-			
Suicide 6)		–	
Rd.accidents 3)		–	
other causes 11)	20	2	22
Intra-cranial Vascular.	27	2	29
Tuberculosis:-			
Respiratory	19	1	20
Non-respiratory	1	–	1
Senility	29	–	29
Respiratory	11	–	11
Miscellaneous	79	8	87
	403	29	432

P.T.O.

THE PRINCIPLE CAUSES OF INFANT DEATHS WERE AS FOLLOWS:-

As per 1943 Annual Report		Transferable Deaths of Infants in Quarter ending 31/12/43.	Total for year 1943.
Congenital	6	–	6
Convulsions	4	–	4
Whooping Cough	1	–	1
Respiratory(Pneumonia 6-Bronchitis 2)	8	Pneumonia 1	9
Prematurity	10	2	12
Debility	1	–	1
Birth Injury	1	–	1
Malignant Tumour (Kidney)	1	–	1
Tumour of Brain	1	–	1
Haemorrhagic Diathesis	1	–	1
Diarrhoea and Enteritis	5	1	6
Spina Bifida	–	1	1
	39	5	44

A.G. NEWELL.

Medical Officer of Health,
Public Health Department,
Wellington House,
BLYTH.

MEMBERS OF THE HEALTH COMMITTEE:-

Chairman - Alderman H. Donnachie

Vice-Chairman - Alderman J. Mitchell

The Mayor,
Alderman Donnachie,
" Hyde,
" Mitchell,
Councillor Allan,
" Allen,
" Baron,
" Young,
" Breadin,
" Carr,
Councillor Crate,
" Curry,
" Foy,
" Hamm,
" Macaulay,
" Murdy,
" Purves,
" Raffell,
" Ridley,
" Searle

MEMBERS OF THE MATERNITY AND CHILD WELFARE COMMITTEE:-

Chairman - Mrs. Darling,

Vice-Chairman - Mrs. Allison.

Chairman, Vice-Chairman and Members of the Health Committee.

Co-opted Members:-

Mrs. Allison,
Mrs. Darling,
Mrs. Gray,
Mrs. Robinson,
Mrs. Mordue,
Mrs. Routledge,
Mrs. Searle,
Mrs. Sowden,
Mrs. Watson.

STAFF OF THE PUBLIC HEALTH AND MATERNITY AND CHILD WELFARE DEPARTMENTS - 1943

Medical Officer of Health Medical Officer, M.&C.W. Authority School Medical Officer Port Medical Officer	A.G. NEWELL, M.D.,C.M.,L.M., D.P.H. J. STOKOE, M.D.,B.S.,B.Hy., D.P.H.(with H.M. Forces)
Assistant Medical Officer of Health and Assistant School Medical Officer	C. BAINBRIDGE, M.B.,B.S., B.Hy.,D.P.H. (with H.M. Forces).
Ophthalmic Surgeon	A.T. PATERSON, M.D.,F.R.C.S. (Edin.), D.P.H.
Oto-Rhinologist	J.A. STENHOUSE, M.D.,Ch.B. (with H.M. Forces)
Women's Advisory Clinic	MRS. D. SINTON, M.B.,Ch.B.
Obstetric Emergency Service	PROFESSOR E.F. MURRAY, M.D.,F.R.C.S.,F.R.C.O.G. H.H. EVERS, M.B.,M.S.,F.R.C.S., F.R.C.O.G. F. STABLER,M.D.,F.R.C.S., M.R.C.O.G. (with H.M. Forces) W. HUNTER, M.D.,B.S., M.R.C.O.G.
Dental Surgeon	H.O.J. BEDGOOD, L.D.S.
Chief Sanitary Inspector	F.B. HARTLEY, M.S.I.A.
Deputy Chief Sanitary Inspector	J.G. SIMPSON, M.S.I.A.
Sanitary Inspector	F.J. DAVIES, M.S.I.A. (deceased Dec. 21/43)
Housing Inspector	A.P. ROBINSON, A.R.I.P.H.H. (with H.M. Forces)
Health Visitors	MISS R.M.FINLAY, S.R.N., S.C.M. MISS O. DIXON, S.R.N., S.C.M. (Resigned Dec./43) MISS D. ROBSON, S.R.N., S.C.M.
Chief Clerk (temporary)	MRS. S. STEPHENS
Junior Clerk	N. GODFREY (with H.M. Forces)
Temporary Overcrowding Clerks	C.FELLOWS T.MORALEE (with H.M.Forces) T.WALTON
Temporary Shorthand-Typists	MISS B. REDBURN " J. DOBSON.

S E C T I O N A.

STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

AREA. — No change in the Borough area took place in 1943, and the acreage remains as formerly at 6,487.

POPULATION. — The estimated population is governed by the various conditions incidental to the present Emergency; for Security reasons, precise figures are not given in this Report, but have been noted for the compilation of more detailed Reports which will be called for at the end of the War.

NO. OF INHABITED HOUSES, i.e. HOLDINGS. 9,332

RATEABLE VALUE. — £165,506

SUM REPRESENTED BY A PENNY RATE. — £628

EXTRACTS FROM VITAL STATISTICS. — Against 1942, + or —

The Birth Rate per 1,000 Population	= 18.1%	+
" Death " " " "	= 11.9%	
" Still Birth Rate per 1,000 Live & Still Births	= 21.0%	—
" Infant Mortality Rate per 1,000 Live Births	= 64.9%	+

	1941	1942	1943
Number of Births	573	539	604
" " Deaths	438	384	403
Number of Births in excess of Deaths	135	155	201

Deaths from Puerperal Causes. —

	Deaths.	Rate per 1,000 Births.
Puerperal State	2	3.2
Other Maternal Causes	1	1.6

The rate of 4.8 per 1,000 total Births is 2.2 less than that for 1942.

The principle causes of Infant Deaths were as follows:—

Congenital	—	6
Convulsions	—	4 *
Whooping Cough	—	1
Respiratory (Pneumonia 6, Bronchitis 2.)		8
Prematurity	—	10 *
Debility	—	1 *
Birth Injury	—	1
Malignant Tumour (Kidney)	—	1
Tumour of Brain	—	1
Haemorrhagic Diathesis	—	1
Diarrhoea and Enteritis	—	5 *

Deaths from Diarrhoea and Enteritis show little alteration from 1942, when six deaths were recorded.

* Of these 20 deaths, most probably some could have been prevented.

The principle causes of Deaths (all ages), were as follows:-

	Males.	Females	Total	Against 1942 + -
Heart and Circulatory	73	62	135	+
Zymotic Diseases.				
Diphtheria - 3)	(transferred)			-
Pneumonia - 25)				+
E.C.S.M. - 2)				+
Whooping Cough - 1)				+
Measles - 1)	15	17	32	-
Cancer	30	20	50	+
Violence.-				
Suicide - 6)				+
Road Accidents - 3)				-
Other causes- 11)	15	5	20	-
Intra-Cranial Vascular	13	14	27	
Tuberculosis.-				
Respiratory - 19)				-
Non-Respiratory- 1)	10	10	20	-
Senility	16	13	29	
Respiratory	7	4	11	
Miscellaneous	49	30	79	
	228	175	403	

177 of all deaths were in persons 65 years of age or over = 44%.

Cancer Deaths, 1943 - Situation of Disease.

Site.		Age Group in Years: Under 36	36 to 45	46 to 55	56 to 65	66 to 75	Over 75	Males	Females	Total
BUCCAL CAVITY	(Mouth	-	-	-	-	-	1	1	-	1 - 1
DIGESTIVE TRACT	(Stomach & Duodenum	1	1	1	5	2	1	8	3	11
	(Colon & Caecum	-	-	1	3	4	-	6	2	8
	(Rectum	-	-	-	1	1	-	1	1	2
	(Liver	-	-	-	-	-	1	-	1	1
	(Pancreas	-	-	-	-	-	1	1	-	1 -23
RESPIRATORY TRACT	(Lung	-	1	2	2	-	-	5	-	5
	(Bronchi	-	-	4	1	-	-	3	2	5
	(Mediastinum	1	-	-	-	-	-	-	1	1 -11
GENITO-URINARY SYSTEM	(Bladder	-	1	-	-	-	-	1	-	1
	(Uterus	-	1	1	1	-	-	-	3	3
	(Ovary	1	-	-	-	-	-	-	1	1 - 5
OTHER ORGANS	(Breast	-	-	-	2	-	1	-	3	3
	(Larynx	-	-	-	-	1	-	1	-	1
	(Kidney	1	-	-	-	-	-	1	-	1 - 5
OTHER MALIGNANT TUMOURS	(Malignant Jaw	-	-	1	1	-	-	1	1	2
	(Lymphosarcoma	-	-	-	-	1	-	-	1	1
	(Mediastinal Tumour	-	-	-	1	-	-	1	-	1
	(Malignant Dysgerminoma	1	-	-	-	-	-	-	1	1 - 5
	TOTAL	5	4	10	17	9	5	30	20	50

SECTION B.

GENERAL PROVISION OF HEALTH SERVICES.

BLYTH AND DISTRICT NURSING ASSOCIATION.

As in previous years, Matron Scott of the Blyth and District Nursing Association has provided the following Table which summaries the work done by herself and the Association for the residents in the Blyth area:-

	Blyth	New Delaval	Bebside
Number of Nurses	5	1	1
Number of Maternity Cases	165	54	14
" " Midwifery Cases	100	5	9
" " Medical Cases	146	40	26
" " Surgical Cases	265	62	24
" " Chronic Cases	27	3	-
TOTAL	703	164	73
Ante-Natal Visits	2,202	407	165
Visits to Maternity Cases	5,029	942	585
" " Surgical Cases	2,868	802	414
" " Chronic Cases	1,420	221	-
" " Medical Cases	1,842	646	530

TREATMENT OF INFANTS AND PRE-SCHOOL CHILDREN.

(Figures applicable to School Children appear in the Annual Report of the School Medical Officer).

Minor Ailments Clinic.

	No. of Cases.	Total Attendances
Diseases of the Skin.-		
Impetigo	53	224
Others	11	109
Minor Eye Defects.-		
Blepharitis	1	3
Others	10	46
Minor Ear Defects.-		
Otorrhoea	14	116
Miscellaneous.-		
Minor Injuries, etc.	23	110
Verminous Heads	12	30
TOTAL.	124	638

Sun-Ray Clinic.

	Between 1 and 5 years	
	B	G
No. of children	20	33
Attendances	773	

48 children were treated for the following complaints:-

Anaemia	–	1
Rickets	–	5
Bronchitis	–	12
Debility	–	14
Glands	–	4
Malnutrition	–	1
Gena Valgum	–	1
Coryza	–	7
Heart	–	1
Asthma	–	1
Scabies	–	1

Dental Clinic.

	Fillings.	Extractions	No. of Cases
Children under 5 years	1	78	31

Ophthalmic Clinic.-

Number of new patients	–	33
" " old patients	–	14
Spectacles prescribed	–	29
" not prescribed	–	8
Referred to Minor Ailments Clinic	–	0

Throat, Nose and Ear Clinic.-

Number of examinations and re-examinations	–	52
Operations for removal of Tonsils and Adenoids	–	11

Orthopaedic Defects.-

No case of major Orthopaedic defects in children of this age was reported during 1943.

Scabies Clinic.-

Number of Baths	–	782
" " Dressings	–	528
" " New Patients	–	99
" " Old Patients	–	13
" " Recurrences	–	23
" " Examinations	–	216

LABORATORY FACILITIES

Arrangements continue as in previous years.

Bacteriological (County Council Laboratory, Newburn).

(A) Pathological -

(1) Throat, Nose and Ear Swabs:

Corynebacterium Diphtheriae present	–	64	
" " not found	–	308	– 372
Virulent C. Diphtheriae present	–	20	
" " " not found	–	2	– 22
Haemolytic Streptococci present	–	8	
" " not found	–	11	– 19
Vincents present	–	1	
" not found	–	1	– 2

(2) Sputum:			
B. Tuberculosis present	– 41		
" " not found	– 233	–	274
(3) Urine (T.B.) present	– 1		
" " not found	– 2	–	3
(4) Pleural Fluid (T.B.) not found	– 2		
(5) Blood (Widal) no reaction	– 3		
" (Urea)	– 18		
(6) Pus (T.B.) present	– 1		
" " not found	– 1	–	25
(7) Faeces (Pathogenic) B. Dysenteriae (Sonne) isolated	– 3		
" " B. Dysenteriae (Flexnor) isolated	– 1		
" no pathogenic organisms found	– 10	–	14

(B) Food, Milk, Water, etc.

(1) Water Samples (various sources)		–	50
(2) Milk Samples.–			
(a) For B. Tuberculosis	– 165	–	165
(b) " Methylene Blue	– 242		
(c) " Pasteurised Milk	– 62		
(d) " Phosphatase Test	– 4		
(e) " Sterility (Milk Bottles)	– 30		
(f) " Heat Treatment Test	– 8	–	346

Chemical (Public Analyst's Laboratory, Newcastle)

Water Samples	–	2

MATERNITY AND CHILD WELFARE SERVICES.

Home Visiting by Health Visitors.

Visits to Infants under 1 year.–			
First Visits after notification	– 469		
Number of re-visits	– 984		
" " Stillbirths visited	– 13	–	1,466
Visits to children 1–5 years		–	2,280
Visits to Expectant Mothers.–			
First Visits.	– 43	–	43

Miscellaneous Visits.

	First Visits	Re-visits	Total.
Puerperal Disease	6	–	6
Ophthalmia Neonatorum	3	6	9
TOTALS	9	6	15

Infant Welfare Clinic.–

Table A.

No. of Sessions.	First Attendances 0–1 yr.	Re-attendances 0–1 yr.	First Attendances 1–5 yr.	Re-attendances 1–5 yr.
102	331	3,459	116	380

Table B.

Total No. of Attendances.	Average No. of Attendances.	Average No. at M.O.'s Sessions.
3,839	37.65	3.39

Total number of children under 5 years of age who attended the Clinic = 470.

The total quantity of milk supplied by the Council at the Clinic to young children, was 6,363 lbs. of Dried Milk.

The following conditions were noted among infants under 1 year of age:-

Congenital Malformations.-
- Phimosis - 29
- Umbilical Herna - 13
- Cleft Palate - 2

Diseases of the Digestive System.-
- Feeding Dyspepsia - 24
- Vomitting and Diarrhoea - 7
- Stomatitis - 3
- Constipation - 5

Diseases of the Respiratory System.-
- Coryza - 4
- Bronchitis and Bronchial Catarrh - 7

Diseases of the Skin.-
- Infantile Eczema - 2
- Impetigo - 6
- Minor Injuries - 3

Diseases of the Eye.-
- Conjunctivitis - 2
- Blepharitis - 1

Diseases of the Throat, Nose and Ear.-
- Otorrhoea - 2
- Cervical Glands - 6

Other Diseases.-
- Anaemia - 2
- Cyst - 1
- Torticollis - 2
- Vincents Angina - 1

Toddlers Clinic.-

Special Sessions were held on Wednesday afternoons, when necessary, for children between the ages of 2 and 5 years:-

No. of Sessions.	Average Attendances.	Examinations by M.O.	Total Attendances.
17	7.1	129	129

At these Sessions, the following conditions were found:-

Congenital Malformations.-
- Heart Diseases - 1

Diseases of the Respiratory Tract.-
- Bronchitis and Bronchial Catarrh - 4

Dental Defects - 6

Diseases of the Skin.-
- Scabies - 3
- Impetigo - 5

Diseases of the Eye.-
- Squint - 3
- Conjunctivitis - 1

Diseases of the Throat, Nose and Ear.-

Enlarged Tonsils and Adenoids	-	14.
Otorrhoea	-	4.

Other Diseases.-

Pes Planus	-	11.
Genu Valgum	-	11.
Anaemia	-	3.
Alopecia	-	1.

Fruit Juices Scheme.

The above Scheme was still in operation during 1943, at the following centres:-

Municipal Clinic, Beulah House.
Bebside Senior School.
Newsham Junior School.
Seaton Sluice (Sessions held fortnightly.)

Attendances reached the following figures for 1943:-

Municipal Clinic.	Bebside.	Newsham.	Seaton Sluice
6,181	1,194	2,361	194

The above figures in all columns represent a gratifying increase over those of the previous period and demonstrates the greater appreciation on the part of the mothers of the value to be obtained from these accessory food factors.

Child Life Protection.

Under Section 206 - 220, Public Health Act, 1936, one person was receiving a child for reward at the end of the year. The Health Visitors reported that the child was well cared for in a satisfactory home.

Infectious Diseases in Children under 5 years of age.-

			Against 1942
Whooping Cough	-	54	-
Scarlet Fever	-	39	+
Measles	-	51	-
Pneumonia	-	16	+
Ophthalmia Neonatorum	-	2	-
Diphtheria	-	13	-
Epidemic Cerebro Spinal Fever	-	1	-
Tuberculosis (Respiratory)	-	2	+
" (Non-Respiratory)	-	1	-
		179	

Health Visitors paid visits to 151 of these cases. All Ophthalmia patients recovered without impairment of vision.

MATERNITY SERVICES.

The statistics show the work done and the number of cases sent to hospitals. The importance of the Child Welfare Clinic cannot be overestimated, and it should be a compulsory duty for all mothers, after leaving their doctors or nurses, within five weeks of the birth of a child, to bring the baby to the Child Welfare Clinic. Imperfect knowledge of hygiene and feeding are among the chief causes of infant mortality. By this, the death rate will be reduced.

Patients admitted to the County Council's Maternity Home at Dilston Hall, Corbridge, are granted treatment free of charge or are assisted in the payment of their fees, according to a scale of charges based upon net income. A number of beds in semi-private wards are available for those able to afford the three guineas per week. (See Table XVI).

Number of patients who completed treatment in 1943:-

Free.	Assisted.	Paid own Fees.	TOTAL.
101	66	69	236

I have received an interesting report on the working of the Hospital for 1943. It is noted there was a sharp increase of births from Blyth. The total admissions were 1,335, the daily average being 43. Blyth cases numbered 213 of the 1,212 primary admissions. 60% of the cases had partial Ante-Natal care at Dilston Hall. There was an increased prevalence of severe Anaemia. No less than 13 cases had a Haemoglobin rate of less than 45%. In all, 34 blood transfusions, using 67 pints of blood, were administered to 23 patients.

Princess Mary Maternity Hospital, Newcastle, to which the Authority subscribed 40 guineas in 1943, treated a further 28 patients.

In addition, eighteen cases were treated at Preston Road Hospital.

Maternity Outfits.

Bags were loaned out sixteen times during the year.

Dental Treatment.

No. of Mothers.	Extractions.	Local Anaesthetics	Dentures Supplied.
9	68	Nil.	7

Ante-Natal Clinic.

The County Council have undertaken for a year, by mutual agreement, to run an Ante-Natal Clinic, and Dr. Jamieson has charge of this. It began on 22nd November, 1943 at Beulah House. I trust after the war, the Council will continue the work with a specialist consulting. It is a public health preventive measure.

There have been eight sessions held to the end of the year. The mothers have routine blood tests done, routine blood pressures taken, the urine is examined each fortnight, and obstetrical examinations are made monthly. The attendances have been large and the midwives are co-operating excellently.

Maternal Deaths.

Causes.-

Puerperal Sepsis	-	1
Caesarian Hysterectomy	-	1
Acute Yellow Atrophy	-	1

Women's Advisory Clinic.

The following is an extract from a report for which I am indebted to Doctor Dorothea Sinton:-

Total Sessions	- 12.
Total Attendances	- 76.
Number of New Patients	
Patients attending for Post-Natal treatment	- 6.
" " " Contraceptive advice	-11.
Return visits	-59.

SECTION C.

1. DIPHTHERIA

Cause: A germ grows on the tonsil and forms a grey to blackish adherent patch. It can grow in the nose and on the vocal cords or sores. The poison (toxin) from it gets in the blood. This poison acts powerfully on the heart and nervous system so that heart failure and paralysis can result. The poison affects all tissues. It can grow in another person's throat and that person become immune to that type of the germ - these persons are "Carriers" of the disease.

Season: Most cases occur between October and March.

Incubation Period: Two to four days from contact, but maybe a week.

Prevalence: Up till recently 60,000 cases notified yearly, with 3,000 deaths. More prevalent among children 1 - 15 years.

Fatality Rate: It is the third most important cause of death in children between the ages of 1 and 5 years, and the most important between 5 and 10 years.

Prevention is secured by a sterile immunisation toxoid. This is injected under the skin in two separate does (of approximately four and eight drops) at a month's interval. It is practically painless. Protection is complete in eight to twelve weeks after the second injection, so that delay is dangerous. To eliminate Diphtheria, we must get at least 50% of children between 1 and 5 years, and 33% of the School children immunised.

Results of Immunisation: Toronto in 1927 had 1,223 cases with 114 deaths. In 1940 this city (larger than Liverpool or Manchester) had not a single case. Parents should note that this is the best Insurance Policy you can give the child and it is free. This active immunisation of susceptible children (1-15 years of age), can protect 90-99 per cent of them. There have been no deaths among our immunised children.

All parents owe a duty both to their children and the community. All voluntary workers, etc., should spread the gospel of immunisation.

In treatment, a much larger quantity of ANTITOXIN is required on suspicion of Diphtheria. 4,000 units may be used and the earlier it is used the milder the case.

Such would be my propaganda leaflet.

An Answer to the Opponents

Why is it you cannot compare the incidence and death rate of one place with that in another, and of one year's rate in the same place with a previous year's effect of the Diphtheria bacillus. There are many factors, thus -

1. There are three strains of the bacillus - grave form (gravis), a medium form (intermedius), and a mild form (mitis). Only two of three of these strains may exist in one locality whilst one or two might be absent from another.

2. The virulence of any strain may differ from that in another locality. Mitis has little power to invade the tissue such as the other strains have.

3. The susceptibility to meteorological conditions will differ at different times from those during the same seasons in another locality.

4. The natural immunity may be higher on the average in one against that in another locality.

5. Acquired immunity through immunisation varies between one another - probably against one strain than another.

6. The dose of toxoid used in immunisation may at any time, for a given strain, be too little to give protection. One can only dose for protection of the majority and not all on a dosage for the very exceptional case.

7. In some areas the children at a certain age (e.g. at 9 years) become naturally immune. To find this out would require testing all under 9 by the Schick Test. On the other hand such immunity may fall any time; and toxoid enforces any natural immunity as well, should such be present.

8. If we want to be absolutely sure (100%) that every immunisation is going to give protection, then every case would have to be Post Schick tested to see if the individual was protected and re-immunised then. How many would undergo that? Is it necessary to put the majority to satisfy the "anti" to this procedure for the few cases that occur among the inadequately immunised? The answer is "Yes", to be scientifically accurate, but practically not essential, since the risk of an immunised person taking Diphtheria is twelve times less than the unimmunised, and the chance of the immunised dying is 100 times less.

9. Anti-toxin given after the 4th day of the disease has little influence on the disease. (Epidemiology of Diphtheria by W.T. Russell).

The death rate varies:-

1. With the type (strain) of the infecting bacillus.

2. With the time of onset of the disease, administration of an adequate dose - the earlier the dose and its adequacy, the less severe will the case be.

3. With the absence of immunisation - no immunisation, then less chance.

4. The age of the patient.

Proof of Protection:

Six cases of Diphtheria out of 12,000 immunised (P.H. - Dec. 43).

By the Minister of Health - October, 1943.

	Immunised Children.	Had Diphtheria.
1st Jan. 1940 to 31st June, 1943	107,000	9,500

Year 1942	1,530	died:	41	had been immunised.
6 mths, 1943	600	"	21	" " "

Carriers:

1. Normal - varies in localities : 5%. It rises before an epidemic by 15 - 20%.

2. Convalescent or after Diphtheria – a certain number are carriers for a time.

3. Mild cases – not treated by antitoxin.

4. Carriers who have been immunised.

The new drug Penicillin has been found in the crude state to kill Diphtheria bacilli besides Streptococci (causing boils, blood poisoning, etc.), Staplylococci (causing skin rashes, etc.) and Pneumococci (causing Pneumonia). Thus there is added hope for the treatment of "carriers" of Diphtheria being eliminated.

I have dealt with Diphtheria to a greater extent because (1) there is some lessening of the attendance for immunisation, and this may be due, to some influence at work by an "anti" society, as I got a pamphlet of 10 pages against Immunisation, and the replies of mothers to "why not have the child immunised?" in general is the same – "I simply don't believe in it." Asked what reason, or what they know about it, they simply can't reply. (2) The unsatisfactory state of immunisation among the "under fives" – 26%.

By giving members a clear statement of facts concerning Diphtheria, I trust to gain their help to propagate the knowledge among parents, and thus save incidence, deaths and expense.

DIPHTHERIA AMONG THE IMMUNISED

1942 Ages –	Under 5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Immunisation Completed	2	1	2	6	3	6	1	2	1	–	–	–	1	1	1	–	1

Under 5 years – 2)
5 to 15 years –22) No deaths
Over 15 years – 4)

Total 28

17 Cases between 6 – 9 years inclusive.

1943 Ages –	Under 5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Immunisation Completed	7	4	8	3	2	9	1	2	1	1	1	–	–	–	–	–	–

Under 5 years – 7)
5 to 15 years –32) No deaths
Over 15 years – –)

Total 39

22 Cases between 6 – 9 years inclusive.

PERIOD AFTER LAST IMMUNISATION

	Under 1 yr.	1	Over 1–1½	Over 1½–2	2	Over 2–2½	Over 2½–3	Over 3–4	Over 4–4½	Over 4½	No Record	Total
1942	7	1	4	1	1	1	-	3	-	9	2	28
1943	7	-	5	12	1	3	1	3	5	2	1	39
TOTAL	14	1	9	13	1	4	1	6	5	11	2	67

N.B. One at 4 months, and all others of under 1 year were above 9 months.

DIPHTHERIA IMMUNISATION PER YEAR

Year	Under 5 Yrs.	% of Pop.	5 to 15 Yrs.	% of Pop.	Total	% of Pop.	Cases of Dipth. not immunised.	Cases of Diph. after immunisation
1937	111	Est.	135	Est.	246	Pop.	No record	No record
1938	81	Pop.	54	Pop.	135	not	"	"
1939	101	not known	415	not known	516	known	"	"
1940	87	3.4%	205	4%	292	3.8%	"	"
1941	614	24 %	929	18%	1,543	20.2%	267	33
1942	743	29 %	889	18.5%	1,632	22.2%	117	28
1943	606	26.4%	615	13%	1,221	17.3%	59	39
TOTAL	2,343		3,242		5,585		443	100

DIPHTHERIA PROPHYLAXIS – 6 months ended 31st December, 1943, Blyth District

i. No. of children (including temporary residents) who completed full course of Immunisation between 1st July and 31st December, 1943.

Under 5 Yrs.	Aged Yrs. 5–15	TOTAL
324	278	602

	Under 5	Between 5 – 15
ii. (a) Approximate estimated no. of children in the area at 31st December, 1943.	2,295	4,750
(b) Number of children known to be immunised at 31st December, 1943.	1,282	4,142
(c) Percentage of present child population considered to be immunised at 31st December, 1943	56%	87%
iii. (a) Cases of Diphtheria in children under 15 years notified between 1st July and 31st Dec., 1943	9	42
(b) No. of cases included in (a) in which child is known to have completed course of immunisation not less than 12 weeks before onset of the disease.	5	20
(c) No. of deaths from Diphtheria registered in area between 1st July and 31st December, 1943, of children under 15 years.	NIL	1
(d) No. of deaths included in (c) in which child is known to have completed course of immunisation not less than 12 weeks before onset of the disease.	NIL	NIL

ENQUIRIES RE INFECTIOUS DISEASES

Diphtheria Notifications - 1943

Mr. Davies	-	65 cases
Mr. Simpson	-	26 cases
Mr. Hartley	-	7 cases
		98 cases

Sanitary Inspectors investigate all cases of Infectious disease above five years of age. Health Visitors do not investigate Diphtheria cases nor Scarlet Fever cases.

Health Visitors do the investigations of children under 5 years of age, re Measles, Whooping Cough, Pneumonia, Ophthalmia Neonatorum, Cerebro-spinal Meningitis. Also investigate details re Puerperal Pyrexia.

2.

WHOOPING COUGH (PERTUSSIS)

Practically all deaths occur among children under five years, and 40 - 50% of those deaths are in infants under one year of age. In 1939, there were 1,273 deaths from Whooping Cough in England and Wales, and of these 90% were under five years, and half under one year. Immunisation for Whooping Cough is not advised before the age of six months.

Pertussis is a preventible disease. It is one of the chief causes of deaths among children under five years of age. It is highly infectious and is reported to affect 60 - 70 per cent of the child population. It is a debilitating disease and has many possible complications (Bronchitis, Pneumonia, Tuberculosis). Vaccines have been found useful, but the supply is short. Early diagnosis by the taking of a post-natal swab is recommended. Early segregation from other children in the house is only practicable by very early diagnosis. The child is not free from infection till a month.

During 1943, we had a total of 54 cases notified of children under five years. The deaths under one year numbered 1.

There were 51 cases of MEASLES notified under the five years of age group.

None of these cases were removed to Hospital, and there was no call for Home Nursing.

SECTION D.

INFLUENZA.

There are two known types of the Influenza virus, viz., Virus A and Virus B, and the former is more associated with epidemics and this Virus has been isolated from some of the recent outbreaks.

The Virus is spread by droplets and has a greater viability in dry than in humid atmospheres. Army experiments - where the floors of barracks, offices, etc., were oiled throughout the winter months proved that dissemination from foors can be prevented. The average weekly incidence of respiratory infections was 7 per 1,000 where floors were oiled compared with 38 per1,000 in untreated control units. The poison of the Cirus acts on the nervous system, hence headaches, pains in the back, pains on the limbs, etc. and acute nervous depression, which lowers the resistance to secondary infections (Pneumonia, Otitis, Sinusitis). Hence the necessity for bed at the earliest in a well ventilated room, not overheated. For the possibility of a spread of the severe type locally, emergency measures to meet the situation were ready, but they frightened the bug. Nevertheless, we had 14 cases of Influenzal Pneumonia.

Those who think that the new drug Patulin (under trial) will put an end to the common cold had better hold their whist awhile.

CANCER.

Whilst encouraging results have been received in the treatment of Cancer of the Prostrate gland by means of a synthetic substance - Diethyl Stilboestrol - there is now news from America of dramtic results by the administration of pills containing synthetic oestro-genus. The cure is limited to Cancer of the Prostrate Gland.

An analysis of 1,000 cases of primary cancer of the lung at the Royal Cancer Hospital shows that the disease is four times as common in males than in females, and that engineers, mechanics, painters and decorators, have a high incidence, while clerks have a low one. Four thousand men die every year from prostatic cancer and hope for these cases appears to be well grounded from the trial of Diethyl Stilboestrol, which has been found to inhibit the growth.

Locally, out largest number of cases concerned the Gastro-intestinal tract.

SECTION E.

COMMUNAL RESTAURANT AND COOKING CENTRES

The communal restaurant and the cooking centres were inspected by me and found satisfactory, except the want of a vegetable store at one. These ensure that at least one balanced meal can be got by the citizens cheaply, and save domestic toil. It is important to ensure Vitamins content. A concession should be made for all old-age pensioners getting their meal at the restaurant for half the price, and thus help their financial difficulties during the stress of war.

VENEREAL DISEASES

The County Council expect to commence a treatment centre for venereal diseases on 2nd February, 1944, at 22, Stanley St., Blyth. The sessions will be held on Wednesdays and Fridays from 3.00 to 6.00 P.M.

All medical practitioners and the Port Authority have been informed.

PNEUMOCONIOSIS (Dust Diseases)

The Council must be interested in this, and so I briefly touch the fringe of the subject. In coal miners' Pneumoconiosis, we have three periods, viz, (a) Anthracosis, (b) Silicosis and (c) a combination of (a) and (b), Silico-Anthracosis, and now called "reticulation". (a) is regarded as a retarder of tuberculosis, (b) in its later stage an excitor of tuberculosis, and (c) may act either as a retarder or excitor, according to amount of coal dust and Silica present.

Preventive methods in mines or industries are effected by (1) substitution of the noxious dust by a harmless one (e.g. alumina in place of flint in pottery works), (2) water spraying of coal and infusion of water into seams, (3) copious ventilation and even shafts, (4) personal protection of worker by masks.

The size of the dust particles is important. It is rare that particles over 10 microns (1 micron=1/1000 of a millimetre, or 1/25,000th of an inch) reach deeply into the lungs, and in one anthracite mine 94% of the particles were under 5 microns, and 55% were smaller than 1 micron.

The Silicosis Scheme was the result of Trade Union Pressure. The concentration of dust varies from 100 particles to 1,000 particles per cubic centimetre of air, and since in quiet breathing 500 cubic centimetres of air are taken in at each breath, and breathing is at the rate of 16 times per minute, one can realise the enormous number of particles daily inhaled. February, 1943, opens a new era for the afflicted by the passing of the Workmen's Compensation Act, 1943, which extends the provisions of the 1925 act to <u>any form</u> of Pneumoconiosis. Thus, it now includes Silicosis, Asbestosis, Byssinosis (chronic Bronchitis and Emphysema of cotton workers), and coal mining Pneumoconiosis.

INFANT MORTALITY

The proper care of the pregnant woman plays its part in the future life of the infant. But the newly born infant requires intelligent hygienic surroundings and treatment by a mother capable of carrying these into effect, to give the infant its best chance of survival. There are many factors involved in the study of infantile mortality. Primarily, there is biological inheritance, and certain parental diseases have definite effects on the child. The poorer classes have larger families than the richer classes, and we know that infantile mortality goes hand in hand with a higher birth rate, and the explanation seems to be that there is greater mortality in infants coming in rapid succession. In the case of later infantile mortality, the main cause is lack of breast-feeding.

In Cork, of those infants who died from Diarrhoea, no less than 94.5% were artificially fed.

The infants of the poor die mainly from Diarrhoea and Respiratory diseases. The infant mortality is much higher in children who do not attend Welfare Clinics. The Government has accepted assumption B of the Beveridge Report, which postulates the establishment of a comprehensive medical service. We shall soon see how far this scheme goes to save infant life.

The benefits of breast feeding are shown by the investigations at the Chicago Infant Welfare Centre, where among 20,000 infants 48.5 per cent were wholly breast fed, 43.0 per cent were partly breast fed, and 8.5 per cent were artificially fed.

The mortality rate among the artificially breast fed was 56 times greater than among the completely breast fed.

4, out of 9,749 breast fed died of respiratory disease.
82, " " 1,707 artificially fed died of " ".

BLYTH DISTRICT

Number of Children Breast and Artificially fed Per Month

Months	1	2	3	4	5	6	7	8	9	Total
Breast Fed	30	45	38	28	24	10	14	13	43	245
Artificially Fed	5	7	12	16	8	13	7	12	50	130

State of Feeding of Infants Found on the First Visit to Homes

Breast Fed	Artificially Fed	Breast Fed Supplemented by Artificial Feeds
406	134	41

The number of breast fed and artificially fed babies who died of respiratory disease during the year was: 1 Breast Fed and 6 Artificially Fed = 7.

Nutritional Oedema is not uncommon among infants whose protein supply is cut short. Pink disease (a rare form of multiple Neuritis), is considered to have a nutritional relationship.

Gastro-Enteritis or Enteritis of Infants

About 3,000 - 4,000 infants die in this country mostly between June and October from Enteritis, and the main symptoms are vomitting and Diarrhoea, leading to dehydration, the mortality rates being high among the poor. Many organisms have been blamed, and liver damage has been a frequent finding, leading to the view of a toxin being a cause of death. There seems a relationship between respiratory diseases prevalent in the mothers of children and the Enteritis. Bottle feeding is one of the greatest causes of infection, and Social Welfare Workers, in connection with housing estates, can do much to advise as to aseptic bottle washing and cleansing of breasts.

Gastro-Enteritis causes dehydration (i.e., loss of body fluid). The normal full-term baby is made up of 75 - 80% water, so that a great loss of this fluid is a serious matter. Per pound of body weight, the infant requires daily 2½ ounces (75 c.c.) of water. To maintain health, the infant must have sufficient water for a free urinary output, as the immature kidney cannot deal with a concentrated urine. If an excess of salt be given, there would be Oedema (retained salt water). Therefore, to regulate the salt composition, enough water must be given. In dehydration, there is a loss of 4 to 8% of the body weight. If an infant has vomitting and Diarrhoea, both water and salt are necessary in addition to its daily requirement.

No. of deaths from Enteritis or Gastro-Enteritis, and Respiratory deaths below 1 year of age in Blyth

	Gastro-Enteritis	Respiratory
1942	6	6
1943	5	8

CAUSES OF ALL DEATHS UNDER FIVE YEARS

January		February	
Congenital Defects	1	Whooping Cough	1
Infantile Convulsions	1	Haemorrhage Diathesis	1
T.B. Meningitis	1	Congenital Defects	1
March		**April**	
Broncho Pneumonia	3	Broncho Pneumonia	2
Premature Birth	1)	Acute Enteritis	2
Inanition	1)	Premature Birth	2
Marasmus	1	Congenital Defects	1
May		**June**	
T.B. Pulmonary	2	Broncho Pneumonia	1
Measles	1	Birth Injury	1
Accident	1	Convulsions	1
Broncho Pneumonia	1	Convenital Defects	1
Premature Birth	1		
Debility	1		
Congenital Defects	1		

July		August	
NIL		Gastro-Enteritis	1
		Malignant Tumour (Kidney)	1
		Premature Birth	2
September		**October**	
Convulsions	2		
Premature Birth	2	T.B. Meningitis	1
November		**December**	
NIL		Bronchitis	1
		Premature Birth	1
		Influenzal Pneumonia	1
		Tumour of Brain	1
		Convulsion	1
		Congenital Defects	1

We require a strong all-round attack against the causes of infant mortality. These are: compulsory attendance at ante-natal clinics, advisory welfare workers for housing estates, day nurseries while mothers are at work, nursery schools, etc. Of three million children under five years of age in Great Britain, only 74,000 have nursery accommodation provided. The burden of motherhood must be eased by Home Helps:- before the war, eight out of every hundred in poor houses died. Communal kitchens or restaurants will add their share of lessening domestic toil.

SECTION G.

HOUSING AND OVERCROWDING

Decent housing of the poor and miners is an urgent need. It may be two or three years after the war before adequate housing can be given. There are certain areas scheduled for Slum Clearance, but every house in such an area is not so bad as being absolutely irreparable. Therefore, those which can now be put into a state for habitation for the duration of the war should be permitted by the Ministry of Health to be repaired, and thus relieve overcrowding and assist transference from houses really unfit for human habitation. Likewise, houses partially built, or only the framework erected, should be allowed to be completed. If in either case the local authority does the work, it could draw the rent as part payment of the expenditure and the balance to be by Government grant.

The total number of condemned houses in the scheduled Clearance areas is 962. The Council have purchased sites on which it is proposed to erect 1,250 houses.

Dwellings in clearance area -

Unconfirmed No. of Houses	No. of Families
126	126

Number of overcrowded houses at end of 1943 = 359, which includes 127 houses in the confirmed clearance area.

Total number of houses in clearance area up to 31st Dec., 1943, still tenanted = 779.

Number of overcrowding up to 31st December, 1943 -

Municipal Houses	50 cases
Slum Clearance	127 "
Others	182 "
Total	359 cases

Number varies from time to time, owing to increase in families, deaths, removals, etc. It would greatly help the work of Sanitary and overcrowding surveys if agents for houses were compelled to advise the local authority of changes in tenancy.

The number of families on the Priority list for houses to the end of the year is 66, of which 14 are for persons suffering from Tuberculosis and giving risk to other members. Since then there is a list added each month.

SECTION H.

MILK

The basic needs for a satisfactory milk supply are:

1. The cows to be entirely free of disease.
2. The milk to have a high nutritive value.
3. That in the drawing off of the milk from the cow, the milk should be clean, the milker's hands should be clean, his throat clear of infectious germs, and the utensils clean.
4. That during transport, no disease germs can enter the milk.

Diseases of the Cow: The most important is Tuberculosis. Its existence varies in different parts of Britain, being on an average 40%. Only a little over one per cent excrete Tubercle bacilli from "open lung" cases, and one case in 500 (0.2%) suffers from Tuberculosis of the udder. The strain of an annual calf predisposes. Insufficient ventilation of byres and Tubercle laden excreta are probable factors in so high a percentage.

Other diseases are Mastitis, Streptococcal infection of the udder (Causing Scarlet Fever, Angina), contagious abortion. Herds are tested for Tubercle and their milk is T.T. milk. Conditions 3 and 4 are difficult to attain and hence the necessity for protection of health by some heat process.

Bacteriological Infection: The ordinary souring of milk is due to lactic and associated acids, due to organisms which produce no disease in man. Ill-health from milk results from specific bacteria-producing disease (viz., Tubercle bacilli, Streptococci, and Staphylococci, Entero-Dysenteriae organisms, etc.) Therefore, the main efforts to protect the public are the measures to be taken to eliminate these pathogenic (disease-producing) organisms. The new White Paper gives control of the health of the cow and the production of milk to the Agricultural Departments. If, coupled with this, pasteurisation is made compulsory, there is hope for a safer milk supply. Further, the bacteriological reports of the Agriculatural bacteriologists should be forwarded to Medical Officers of Health. We want no hush-hush policy on this vital point. The Medical Officer of Health must still be given power to sample all milk to be pasteurised, with power to reject any unsuitable.

The White Paper retains for local authorities power to deal with infection under Sections 17, 18 and 19 of the Milk and Dairies order of 1926. These powers are not adequate. Whilst a suspected person can be examined, power is not given to examine his excreta. Local authorities will still have the power to enforce the statutory provisions for the protection of milk at depots, retail premises, during transport and distribution.

Milk adulteration will be safeguarded by sale of Milk Regulations, 1901, re-enacted in the Food and Drugs Act of 1938.

The White Paper suggests that the Minister of Food be empowered in certain areas to make it an offence to sell milk by retail unless it is either (1) heat-treated, (2) or sold as T.T. milk, or (3) it is accredited milk sold by a retailer (whether producer, retailer or dairyman), who sells the milk of a single accredited herd (the last a dangerous milk).

T. T. milk, though free of T.B., can convey the other diseases, and so should be pasteurised. The control of this must remain with the local authority.

Where the trade cannot provide the produce-retailers and dairymen with heat treatment apparatus, the local authority can so provide.

The local authority should only licence a plant which has the production licence of the Ministry of Health. The phosphatase test is a laboratory test to find out the efficiency of the heat treatment. Control of contamination, subsequent to pasteurisation, is safeguarded by the Methylene Blue test for the keeping qualities of milk.

Measures to Improve the Quality of the Milk Supply (White Paper Card 6454)

The Government's policy is (1) a sound breeding policy, (2) regular inspection of dairy herds by veterinary officers, and the control of disease, (3) improvement of the conditions under which milk is produced by central control, and (4) increased production and consumption of Tuberculin Tested milk (T.T. milk).

Under new policy:

T. T. Herds	No change in inspections.
Accredited Herds	(a) heat treated – inspection once a year.
	(b) not " " – once a quarter.
	(c) " " ", but from attested herd – once in six months.
All other Herds	(a) if heat treated milk – once a year.
	(b) if not " " " – as far as possible twice a year.
	(c) any herds with a bad history – additional inspections.

Transfer of Powers: Minister of Agriculture to be responsible for all matters re the production of milk, and the veterinary staff will supervise the conditions under which milk will be produced. The Milk Testing and Advisor's Scheme will be extended, and all milk going to larger depots will be tested and its keeping quality tested. Production and consumption of T.T. milk to be increased. The producer will get 4s. a gallon, distributors will pay no premium to producers, and the Ministry of Food will take over from producer all his T.T. milk. A maximum price will be prescribed for this T.T. milk to the public, and the distributors will get a margin from this.

Before any area is scheduled, the Minister of Food will satisfy himself that adequate plant exists for treatment of the whole of any milk sold in the area (except – (1), (2), (3) above). The Government mean to excercise this control over all areas as soon as is practicable. It is proposed to get the Wartime Associations of Suppliers to submit plans for this heat treatment. Where they fail to provide means for the milk of small producers, then local authorities may install and operate such plants, and will get the margins allowed as for wholesalers. If small producers are put to extra expense by having to transport their milk at a distance, they will be allowed these costs. He will sell his milk to the Milk Marketing Board and buy the heat-treated milk at the price the Ministry of Food sells to any dairyman.

Until the transfer of powers are arranged, milk will continue to be sold as "T.T. milk", "pasteurised", "accredited" or "sterilised" milk.

A census is to be made in all schools to find out the type of milk used, and to give "T.T. milk" or "pasteurised" where such is not used.

Heating and its killing effect on disease germs in milk:-

Typhoid Bacillus are killed at 60°C (140°F) (for several minutes) and in 5 minutes if kept at 60°C.
Diphtheria Bacillus are killed at 58°C (138 F) for 10 minutes.
Dysentery Bacillus are killed at 60°C (140°F) for 10 minutes.
Tubercle Bacillus are killed at 65°C (150°F) for 15 minutes, or 70°-80°C (158° - 175°F) by some.
Pasteurisation in closed pasteurisers for not less than 20 minutes at 140°F (=60°C) is recommended.

Thus efficient pasteurisation will kill T.B. bacilli.

Tuberculosis in Cows:-

The prevalence of Tuberculosis in cows can only be found out by the Tuberculin test, since it is known that Tubercle bacilli can gain access to milk from cows which show no signs of the disease, nor on post-morthem examinations of the udder show any infection of them. What is more, the conclusion has been reached that Tubercular cows do not expel Tubercle bacilli until some time after they have contracted the disease. The excrement of Tubercular cows is highly dangerous, even when the lesions are slight.

Bottle Washing:-

It is essential that bottles should be washed and sterilised before they are refilled with milk. Any preliminary rinsing and followed by a wash in lukewarm water is insufficient, and it is ridiculous to put up a costly plant and then put clean milk into unsterilised bottles. Expensive machinery is not always required, but expense is lessened when a large number of bottles have to be done by machinery. It is both to consumer's, as well as Dairy's interest that consumers should put cold water into the bottles after use, and bottles should not be left on the pavements. This should be illegal under penalty. Filthy bottles have to be thrown away at great loss. For dirty bottles a separate tank is required, in which bottles are soaked in a ½ per cent caustic soda solution, as this lessens cleansing.

The bottles then must be washed thoroughly in cold water. This is followed by a hand-brush or power-brush fixed to the washing tank; these brushes provide for internal and external brushing. Next, washing and brushing is done in a hot-water tank. Finally, the bottle must be sterilised by steam.

For larger distributors, there are machines which will wash and sterilise bottles at the rate of 10,000 per hour.

Our Milk Supply:-

The statistics will show you that we have had 16 samples of milk found with Tubercle bacilli; one of these was in pasteurised milk.

The incoming milk must be regarded generally as dirty milk. Whilst one firm is doing good work in offering pasteurised milk, no pasteurisation can make dirty milk clean. At the same time,

pasteurisation to be efficient must be intelligently supervised. An easy method of home pasteurisation is to put the jug containing the milk in hot water just off the boil for twenty minutes by the watch. At the end of that time, it is pasteurised (or repasteurised if pasteurised milk is used).

For a cleaner milk, I think the Government should install (or insist) at each farm a small Preheater for the milk, and a simple Steam Steriliser of churns. Thus the bacterial count will be greatly minimised before the milk reaches a pasteurisation plant. It should insist on certificated supervisors of pasteurisation plants.

SECTION I.

DISINFECTION.

The Sanitary Inspector's report shows the number of times disinfection was employed. There is still much misunderstanding about the value of disinfection, and some people get unduly nervous about it. To disinfect a room with damp walls, cracked ceilings and generally dirty is simply to waste money and time. It is a myth to regard disinfection of any value in Measles, Scarlet Fever, Diphtheria and Chicken Pox. Probably in only Small Pox and Tuberculosis thorough disinfection is called for. Nature supplies us with free disinfectants through ventilation and sunlight; and soap and water goes far for skins, clothes, woodwork, floors, etc. Most pathogens do not live in oil, and so the success of oil for floors, apart from its adhesive properties.

RAT DESTRUCTION

A recent pamphlet on Rodent Infestation drew our attention to a system of baiting for the "extermination" of rats and mice. The system will no doubt destroy these pests, but, in my opinion, it has no claim as a means for "exterminating" them, which it will never do. Rats are more wily than the wiliest among the department concerned. The system is that at first an "invitation" or "luring" baiting of traps is set, with some appetising food of a non-lethal character. Information is sent round by all the rats of this delicacy, so each brings, say, a female partner (or a brother or son), so that the number is doubled next night when they come to eat, not a delicacy, but a very lethal mixture, which, we will say, kills all of them. Against this you have to count the breeding females (six to eight times a year), who will each produce, say on a low average, four young ones. Further, you have to allow for the wiliness of rats, for when they see a number of their fellow creatures dying or missing (and some less infected will be seen dying) then they become chary of the traps, and will even migrate in thousands to other spheres. I have seen thousands of rats, marching in soldiery fashion, going from one village, where rats were dying of plague, to another village. It is an extraordinary sight. Work out the geometrical progression of the suggested system and see where it lands.

1.

	Original Number	Invitation Bait eaten by	Lethal Bait Kills	Number Left	Estimated young females–say ½ of 4 to each of say ½ under column 4.	Total remaining
A.	100,000,000	200,000	400,000	99,600,000	99,600,000	199,200,000

B. In next 4 months, your lethal baits will kill exactly half of the month before, and for the 5th month put same as the 4th, then the total is 400,000.

But now the population, at the end of five months, is 199,200,000, less your 400,000 – leaving 198,800,000--nearly 2,000,000 with three or four breeding seasons to come.

These ratios could be proportionately increased to any given original population. The estimate re females is rather on the low side.

Simply killing rats will not <u>exterminate</u> them. The system I found by practical observation was, after trapping, the males are caught and set free. All females caught are put into a bigger cage and as a precaution against rat fleas, the whole cage, containing 50 or over, was put into a drum of Cyllin, to drown both rats and fleas. Each catcher then recorded his "catch", together with notes re pregnancy, etc. This greatly reduces the female population and breeders. The result is fighting between the males for the females. Scratches and infections cause death of some, and also of further females. There is less breeding. I would, in future, advise cutting the male tails to estimate their population.

The system, to be of use in this country, must be a compulsory national scheme. The present dead-letter Rat Bill should be expunged. County Councils and Borough Councils must all carry it out so that no migration can go unattacked. The reduction will be surprising, but it requires the one essential - honesty in baiting and supervision. When the female population comes down to five per cent, it will be time to destroy males, many of whom will die of old age, or grief at the want of a female partner!

The litter from a pregnancy may be up to fourteen - the average is put at seven at a birth. This is after a gestation of 22 days. The young are said to be able to be independent of the mother's care after a month. The young females are sexually mature at the age of three months. Thus a female rat can produce a litter every six weeks, but there are seasonal variations in the number of the progeny, the peak being in the three months of March to May. A pair can thus in a year produce a litter of 40 or more. The combined progeny of a pair and their young may produce 600 young in a year. In my figure, I have very greatly reduced the progeny to account for all deaths, so that I think I can only be accused of gross underestimating.

There is a danger in underestimation. In mere rat-killing on the scale proposed, there is a danger of sewer rats going to other areas, or even to houses. In the latter event (forced by need of food), the penalty will not be their nuisance, but the danger to health by the introduction of disease by their contamination and their excreta.

A. R. P.

The First Aid and Rescue parties are now amalgamated under the Borough Engineer as a Rescue Service, and they are responsible for not only the rescue of the casualties, but also for all First Aid, and, therefore, must be fully trained for this latter service. This does not relieve any Warden and others nearby from giving First Aid. The general rule will be to send to all incidents at which there are casualties (trapped or not) at least one Rescue Party and one Ambulance; two ambulances if a large incident if they are available or can be spared. The only exception to this rule will be when a very large raid is on and Rescue Parties cannot well be spared, is for one ambulance to be sent when there are four or less casualties who are untrapped.

GAS: Mustard and Phosgene are the most important poison gases which may be used, and the public have been well warned to have their respirators tested and be expert in putting them on. Each citizen should know where his (or her) First Aid Post is, or Cleansing Station. They themselves should, by now, know what to do if mustard gas is used.

FOOD DECONTAMINATION: is put under either a Veterinary Officer or a Sanitary Inspector and either officer is responsible to the Medical Officer of Health for the working of the scheme. Food Decontamination Squads consist of 5 persons, and undertake part-time training - both men and women may be used. Locally Mr. Hartley is the Food Decontamination Officer. Permission for the Squads to go out must be got from Main Control.

The County Council is the scheme-making authority, so that this Council is not responsible for their decisions. More local devolution of power, so far as the casualty services are concerned, would have been wiser. The First Aid Posts are staffed by a Medican Officer and between 30 - 50 part-time personnel at each.

The Rest Centres form an important part of the casualty services. People who are rendered homeless by an air raid are casualties therefrom, and require medical supervision.

The shelter accommodation is ample, and the six largest were inspected by me.

Mr. Gibson has been given to me as my A.R.P. Clerk, and is very helpful by his ability.

STAFF (Health Department)

It is a pleasure to record that you have an excellent staff of Health Visitors and Nurses for the clinics, who are punctual and zealous in their work, and have given me every co-operation. The housing question is a matter of vast importance to the miners and the poor people, and so the question of permission to remain in some of the houses in slum areas, and the question of overcrowding requires a great deal of work. It demands my recording that the important duties connected with overcrowding are most conscientiously done by Mr. Walton, who also does the statistical records of the Diphtheria Immunisation. Last year (1942), Mr. Walton paid 8,306 visits. This year it is 3,377, owing to illness and shortage of staff, entailing extra duties. Even after the war, this work must be kept up, but the statistics do not reveal the intricacies connected with the work, as only an examination of the files and records, necessary for the changing conditions, will show. His services then will even be more valuable, as it is hoped some measure of building will go forth. See the Tables re overcrowding.

To Mr. Fellows is due our thanks for the compilation of most of our Health statistics. He is in charge of the records for infectious diseases, and the arranging of the admission to hospital of such cases. It is time, after eight years of good service he was put on the permanent staff, and I recommend this.

There is now a vacancy and need for a permanent male Head Clerk, preferably one who can typewrite.

Sanitary Staff: The work of the staff is largely concentrated in the business area – the ankle and instep of the leg and foot of Blyth's configuration. The work done by the late third Sanitary Inspector averaged about ten visits a day. Thus, at present, there is no call for the vacancy to be filled, but if the Borough Council decide on a third Inspector, then I advise the abolition of the post of Chief Sanitary Inspector, and under Article 28 of the Sanitary Officers (outside London) regulations of 1935, distribute the work of the three inspectors per ward to each, and each to work directly under the orders of the Medical Officer of Health, as prescribed by these regulations. This will give each an independence of action, and an interest in every branch of their work. It will also keep the Medical Officer of Health in direct touch with everything affecting the district.

REMARKS ON STATISTICAL TABLES

Table I. Notified Infectious Diseases for eight years.

(a) the largest number of notifications from one disease is that for Measles – 751 deaths in 1940, and the second to rank in totals is Diphtheria – 300 cases in 1941.

(b) Pneumonia (82 cases) and Tuberculosis of the lungs (57 cases) have each caused the highest number of cases in 1943 over that for any of the other seven years.

(c) the three chief causes of deaths from Infectious Diseases during the last eight years have been Tuberculosis of the lungs – 54 per cent of all these deaths; other forms of Tuberculosis with 41.9 per cent, and Pneumonia 33.8 per cent.

Table II. Age distribution of notifiable diseases:

(a) note that during school life how markedly infection arises – 181 cases between ages 5 – 10 years, and 52 cases between 10 – 15 years of age.

(b) that Scarlet Fever and Diphtheria were the two infectious diseases through schools.

Table III. (a) cases and deaths from Diphtheria 1941, 1942 and 1943. Of 543 cases during the last three years, there were 28 deaths and none of these were immunised. There was not a single death among the immunised.

(b) while in 1942, at least 50 per cent of the cases occurred between January and May, half the cases in 1943 were between September and December.

(c) This shows the excess of Scarlet Fever, Pneumonia and Tuberculosis, in 1943 over that of 1942.

Table IV. Scarlet Fever notifications for two years – 1942 and 1943. The table shows how school children between 6 – 14 years form over 55 per cent of the cases.

Table V. Tuberculosis cases and deaths for two years – 1942 and 1943. The table shows the incidence and deaths per quarter for all forms of Tuberculosis is practically the same for males and females.

Table VI. Shows the number of cases of Tuberculosis known to exist among the community.

Table VII. Shows the age distribution of cases of Tuberculosis – the main incidence being between 15 and 35 ages, and practically equally among males and females.

Table VIII (a) Here I have shown the fatality rate of Diphtheria for 8 years. The lowest was 1.5 per cent in 1936, and the highest 11.1 per cent in 1938.

(b) The age distribution of cases of Diphtheria shows the influence of school spread.

(d) Total Diphtheria immunisations performed to end of 1943, and the number performed during 1943.

(e) Of the total 98 cases of Diphtheria in 1943, there were 3 deaths, all NOT IMMUNISED; and of 39 cases of Diphtheria among the immunised, there were no deaths.

REMARKS ON STATISTICAL TABLES (Contd)

Table VIII (f) Cont'd.
Analysis of these 39 cases shows that four months was the least period that elapsed between the last dose and the development of the disease, and this was in case No. 38, which probably had a mild infection at the time without symptoms. There were only three cases which had the attack within ten months. All others varied between ten months and four years.

Table IX. By this table, I show how during the existing war period of five years, compared with the five years of the last world war, we have an all-round lowered death rate among infants and the Infectious Diseases; but the birth rate shows an average annual fall of 221.

Table X. This table, re Cancer Deaths, shows a steady increase in deaths from Cancer during the last thirty years. Like the Tuberculosis deaths, it is practically equally divided among the two sexes each year. One can only put the influence of coal dust as a possible cause.

Table XI. This interesting table gives a history over twelve years of the Birth Rate, Death Rate, Infant Mortality Rate and Tuberculosis Death Rate, and the comparison of these against the rates for England and Wales, as well as against the rates for the counties.

Table XII. This table shows
(a) the existence of 359 overcrowded houses at December 31, 1943, involving 2,134 persons.

(b) that the number of overcrowded holdings is nearly 4 per cent of all the holdings in the Borough.

(c) that the overcrowded holdings form 13.2 per cent of the slum areas.

Table XIII. This table gives the details of overcrowding per ward and shows
(a) that of the holdings in Bebside, 5.77 per cent are overcrowded, and in Croft Ward, 4.39 per cent of its holdings are overcrowded.

(b) that of the holdings in the clearance areas, 21.41 per cent of those in Plessey Ward are overcrowded, and 14.94 per cent of those in Croft Ward.

(c) of our municipal houses, 2.68 per cent are overcrowded - mainly in Bebside and Croft Wards.

(d) This table gives a summary of (a), (b), and (c).

Table XIV (a) Shows the number of persons (units) to each family - thus there are 2,889 families which are made up of 2½ or 3 persons, but the most overcrowded are in the families composed of 3½ to 4 units.

(b) Shows the number of houses under the permitted number of units, and the number under each which are overcrowded. Thus, of 1,127 houses, which should contain only 2½ to 3 units, there are 173 of them overcrowded.

REMARKS ON STATISTICAL TABLES (Cont'd)

Table XIV (c) Shows the state of overcrowding in the Borough for the last nine years, which shows that for all practical purposes, the Borough has had for the last five years, 4 per cent of its houses overcrowded.

TABLE I

INFECTIOUS DISEASES NOTIFIED (1936-1943)

	1943	1942	1941	1940	1939	1938	1937	1936	Gross Totals
Scarlet Fever	123	65	24	30	95	128	129	96	690
Diphtheria	98	145	320	44	63	36	37	65	788
Erysipelas	13	7	10	16	34	33	19	21	153
Para or Typhoid Fever	NIL	NIL	NIL	NIL	3	2	NIL	1	6
Pneumonia	82	55	39	68	45	44	76	64	473
Peurperal Pyrexia	6	4	6	9	7	7	10	8	57
Cerebro-Spinal Fever	1	3	7	3	NIL	2	1	2	19
Acute Poliomyelitis	NIL	NIL	NIL	1	1	NIL	NIL	1	3
Acute Encoeph Letharg	NIL	NIL	NIL	NIL	NIL	1	1	NIL	2
Dysentery	4	1	1	18	6	1	NIL	NIL	31
Ophth. Neonatorum	2	5	5	3	2	2	2	1	22
Tuberculosis (Resp.)	57	38	44	38	47	38	35	36	333
" (Other)	8	8	13	11	15	10	14	14	93
Whooping Cough	90	79	299	6	4	(Not Notifiable)			478
Measles	80	912	77	751	(Not Notifiable)				1,820
Food Poisoning	NIL	5	8	NIL	NIL	NIL	NIL	NIL	13
Total Notifications	564	1327	833	998	322	304	324	309	4,981

NUMBER OF DEATHS (INFECTIOUS DISEASES)

	1943	1942	1941	1940	1939	1938	1937	1936	No. of Deaths	% over. 8 Yrs. of cases notified
Scarlet Fever	NIL	NIL	1	NIL	1	NIL	NIL	NIL	2	.3%
Diphtheria	3	5	20	3	5	4	1	1	42	5.3%
Erysipelas	NIL	NIL	NIL	NIL	NIL	2	3	1	6	3.9%
Para or Typhoid Fever	NIL	NIL	NIL	NIL	NIL	NIL	NIL	1	1	16.6%
Pneumonia	26	10	23	26	14	16	27	18	160	33.8%
Puerperal Pyrexia	NIL	2	NIL	2	NIL	1	2	NIL	7	12.3%
Cerebro-Spinal Fever	1	2	1	NIL	NIL	1	NIL	NIL	5	26.3%
Acute Poliomyelitis	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	-
Acute Enceph Letharg	NIL	NIL	NIL	NIL	2	1	2	2	7	-
Dysentery	NIL	NIL	NIL	2	NIL	NIL	NIL	NIL	2	-
Ophth. Neonatorum	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	-
Tuberculosis (Resp.)	19	25	17	31	24	20	16	28	180	54.0%
" (Other)	1	6	3	4	7	5	6	8	40	41.9%
Whooping Cough	1	NIL	4	NIL	NIL	(Not Notifiable)			5	1.0%
Measles	1	2	1	2	(Not Notifiable)				6	.3%
Food Poisoning	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	-
TOTAL DEATHS	52	52	70	70	53	50	57	59	463	9.3%

TABLE II

AGE DISTRIBUTION OF NOTIFIABLE DISEASES

DISEASES.	Under 1 year	1 - 2	2 - 3	3 - 4	4 - 5	5 - 10	10-15	15-25	25-35	35-45	45-55	55-65	Over 65 yrs.	Totals
Scarlet Fever	1	3	12	12	12	58	19	4	–	2	–	–	–	123
Enteric	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Entéric	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diphtheria	–	1	1	1	10	48	22	7	3	4	1	–	–	98
Erysipelas	–	–	–	–	–	–	–	–	–	2	4	3	4	13
Tuberculosis, Pul.	–	–	1	1	–	3	2	21	17	5	4	2	1	57
Tuberculosis, Other	–	–	–	–	1	1	1	3	2	1	–	–	–	8
Pneumonia	4	4	1	3	4	8	7	x8	9	8	11	6	10	83
Enceph-Letharg	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Oph.Neonatorum	2	–	–	–	–	–	–	–	–	–	–	–	–	2
Puerperal Pyrexia	–	–	–	–	–	–	–	2	3	1	–	–	–	6
E. C. S. M.	1	–	–	–	–	–	–	–	–	–	–	–	–	1
Whooping Cough	8	12	9	12	13	36	–	–	–	–	–	–	–	90
Measles	7	12	8	6	18	27	1	*4	–	–	–	–	–	83
Dysentery	–	–	–	–	–	–	1	–	–	1	–	–	2	4
Polio-Enceph'tis	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Polio-Myelitis	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Malaria	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TOTALS	23	32	32	35	58	181	52	49	34	24	20	11	17	568

* Includes 3 Non-Civilians.
x " 1 "

A. DIPHTHERIA TABLE III

	Cases	Deaths	Remarks
1941	300	20	Not immunised
1942	145	5	" "
1943	98	3	" "
TOTALS	543	28	

B. DIPHTHERIA

Month	1942 No. of Cases Notified	1942 No. of Deaths	1943 No. of Cases Notified	1943 No. of Deaths
January	29	1	7	1
February	15	-	6	-
March	12	-	5	-
April	6	1	7	-
May	13	1	11	-
June	10	1	1	-
July	9	-	5	-
August	10	-	2	-
September	13	-	6	-
October	7	1	10	-
November	7	-	22	2
December	14	-	16	-
TOTALS	145	5	98	3

C. ANNUAL RETURNS FOR TWO YEARS OF NOTIFIED CASES OF INFECTIOUS DISEASES

	Scarlet Fever	Diphtheria	Erysipelas	Pneumonia	Puerperal Pyrexia	Cerebro Spinal Fever	Dysentery	Oph. Neonatorum	Tuberculosis, Pul.	Tuberculosis, Other	Whooping Cough	Measles
Year 1942	65	145	7	55	4	3	1	5	38	8	79	912
Year 1943	123	98	13	82	6	1	4	2	57	8	90	80

TABLE IV

S C A R L E T F E V E R – 1942 and 1943

Cases notified during 1942 = 65 Cases

MONTH OF YEAR	CASES NOTIFIED	PRE-SCHOOL 1	2	3	4	5	SCHOOL 6	7	8	9	10	11	12	13	14	ADULTS 15	16	17	18	19	20	21	22	23	24	28	30	33	36	38
January	4				1				1				1														1			
February	NIL							1																						
March	1						1																							
April	2									1																		1		
May	1						1																							
June	3			1					1	1																				
July	4						1			1		1											1							
August	2					1							1																	
September	3		1						1			1																		
October	12			1	2	2	2	1		1		1		1		1														
November	17		2	3	1	2	1	1	1		1	1	1	1	1			1												
December	16				1	1	3		3	3	1	1	1						1						1					
TOTALS	65		3	5	5	6	8	3	7	7	2	5	4	2	1	1	–	1	1	–	–	–	1	–	–	1	1	–	1	–
"				19								38											7							
January	8		3	1	1			1		2																				
February	12		1	1	1	2		1		3			1	1	1															
March	8		1	1	1	1	2	1							1															
April	7		1		1		2	1		1						1														
May	2		1								1																			
June	6			2			1	1	1	1																				
July	7		2	2				1	1		1																			
August	9			2	1				1		3	1																1		
September	12		1		2	1		1	2		1		1	3																
October	22		2	1	2	2	4	3	2	1	3				1															1
November	21	2		2	2	2	4	2	1	2		1		1									1	1						
December	9		1	1	1	1		1	1	2								1												
TOTALS	123	2	13	13	12	9	13	13	9	12	9	2	2	5	3	1	–	1	–	–	–	–	1	1	–	–	–	1	–	1
"				49								68											6							

Cases notified during 1943 = 123 Cases.

TABLE V

T U B E R C U L O S I S – 1942 and 1943

1 9 4 2

	NOTIFICATIONS				DEATHS			
	MALES		FEMALES		MALES		FEMALES	
	Pul.	Non-Pul	Pul	Non-Pul	Pul	Non-Pul	Pul	Non-Pul
Quarter ending 31 March, 1942	5	2	4	2	5	1	4	NIL
" " 30 June, "	9	NIL	2	2	1	NIL	2	2
" " 30 Sept., "	3	NIL	6	3	4	1	2	NIL
" " 31 Dec., "	4	1	7	NIL	1	1	2	NIL
TOTALS	21	3	19	7	11	3	10	2
GRAND TOTALS	24		26		14		12	
" "	50				26			

1 9 4 3

Quarter ending 31 March, 1943	8	2	4	NIL	4	NIL	1	NIL
" " 30 June, 1943	8	1	13	NIL	3	NIL	5	1
" " 30 Sept., 1943	8	1	5	1	NIL	NIL	2	NIL
" " 31 Dec., 1943	6	NIL	5	2	4	NIL	NIL	NIL
TOTALS	30	4	27	4	11	NIL	8	1
GRAND TOTALS	34		31		11		9	
" "	65				20			

TABLE VI

STATEMENT OF CASES OF TUBERCULOSIS - 1943

	MALES		FEMALES		
	Pul	Non-Pul	Pul	Non-Pul	Total
(a) Number of cases of Tuberculosis on Register at the commencement of year.	155	41	140	46	382
(b) Number of new cases notified under the Regulations of 1930 for the first time during the year.	29	4	28	3	64
(c) Number of cases removed from the Register during the year.	13	NIL	9	1	23
(d) Number of cases remaining on the Register at the end of the year.	171	45	159	48	423

TABLE VII

TUBERCULOSIS

1943

	New Cases				Deaths			
	Respiratory		Non-Respiratory		Respiratory		Non-Respiratory	
	M.	F.	M.	F.	M.	F.	M.	F.
0 – 1	–	–	–	–	–	–	–	–
1 – 5	–	2	–	1	–	1 N.N. 1	1 N.N.	–
5 – 15	2	3	–	1	–	–	–	–
15 – 25	10	11	1	2	1	3	–	–
25 – 35	10	7	2	–	2	2	–	–
35 – 45	4	1	1	–	1	2	–	–
45 – 55	3	1	–	–	4	1	–	–
55 – 65	1	1	–	–	1	–	–	–
Over 65	–	1	–	–	–	–	–	–
TOTALS	30	27	4	4	9	9 + 1 N.N.	1 N.N.	NIL
GRAND TOTALS	57		8		18 + 1 N.N.		1 N.N.	

N.N. = Non-Notified T.B. Case.

TABLE VIII

DIPHTHERIA

A. The Table set out below gives comparison with recent years.

	1943	1942	1941	1940	1939	1938	1937	1936
No. of Notifications	98	145	300	44	63	36	37	65
" " Deaths	3	5	20	3	5	4	1	1
Fatality Rate	3.0%	3.4%	6.7%	6.8%	7.9%	11.1%	2.7%	1.5%

B. Table recording the age-groups of cases of Diphtheria during 1943.

Age Groups	No. of Cases	No. of Deaths	Fatality Rate
0 - 1 years	-	-	-
1 - 2	1	-	-
2 - 3	1	-	-
3 - 4	1	-	-
4 - 5	10	-	-
5 - 10	48	2	4.16%
10 - 15	22	-	-
Over 15 years	15	1	6.6%
TOTALS	98	3	3.06%

C.

	Treated in Hospital	Treated at Home	Total
Diphtheria Cases	95	3	98
Convalescent Carriers (V.T.+)	11	NIL	11
Healthy Carriers (V.T.+)	2	NIL	2

D. Diphtheria Immunisation.

	Estimated Child Population	Number fully Immunised	Percentage
Under 5 years	2295	1282	56%
5 - 15 years	4750	4142	87%
TOTALS	7045	5424	77%

E.

1943	Children under school age	School Children
First Doses	600	440
Completed Treatment	606	615

Total number of children completed immunised during 1943 = 1,221

There were 98 cases of Diphtheria notified in 1943, and of the three deaths, none were immunised. There were 39 fully immunised children who developed clinical symptoms out of the total of 98 cases, but there were no deaths.

TABLE VIII (Cont'd)

F. No.	Date Immunised 1st Dose 0.2 c.c.	2nd Dose 0.5 c.c.	Date of notification of Diphtheria	Remarks
1.	3.10.41	31.10.41	6.1.43	
2.	12. 4.39	11. 5.39	20.1.43	
3.	17. 4.39	17. 5.39	10.2.43	
4.	23. 5.41	20. 6.41	12.3.43	
5.	23. 7.41	20. 8.41	17.3.43	
6.	24. 7.41	21. 8.41	30.3.43	
7.	-	5. 2.35	6.4.43	
8.	29. 5.42	26. 6.42	9.4.43	
9.	23. 7.41	20. 8.41	22.4.43	
10.	15. 3.39	18. 4.39	6.5.43	
11.	20.12.40	21. 3.41	9.5.43	
12.	18. 4.39	19. 5.39	14.5.43	
13.	2. 6.39	30. 6.39	17.5.43	
14.	24. 9.41	22.10.41	31.5.43	
15.	16. 2.42	16. 3.42	5.7.43	
16.	13. 6.41	11. 7.41	23.8.43	
17.	29.11.40	10. 1.41	13.9.43	
18.	2. 3.39	30. 6.39		
	15. 7.41	12. 9.41	13.9.43	
19.	18. 3.39	31. 7.42	5.10.43	
20.	8.12.41	5. 1.42	16.10.43	
21.	16.10.42	13.11.42	19.10.43	Both immunised same time & developed attack about same time.
22.	16.10.42	13.11.42	21.10.43	
23.	21. 1.43	18. 2.43	5.11.43	= 9 months elapsed.
24.	21. 8.42	18. 9.42	12.11.43	
25.	21. 4.39	19. 5.39	13.11.43	Both immunised same time & developed attack same time.
26.	21. 4.39	19. 5.39	14.11.43	
27.	20.11.41	1.12.41	22.11.43	
28.	22. 8.41	24. 9.41	23.11.43	
29.	19. 1.42	16. 2.42	25.11.43	
30.	21. 1.43	18. 2.43	3.12.43	= 10 months elapsed.
31.	-	25. 5.38	4.12.43	
32.	22.12.41	2. 2.42	10.12.43	
33.	18.10.40	15.11.40	10.12.43	
34.	1. 5.42	29. 5.42	11.12.43	
35.	21. 1.43	18. 2.43	11.12.43	= 10 months elapsed.
36.	30. 1.42	27. 2.42	14.12.43	
37.	8. 6.42	24. 8.42	14.12.43	
38.	22. 7.43	21. 8.43	27.12.43	= 4 months elapsed.
39.	27. 6.41	24. 7.41	30.12.43	

TABLE IX

DEATH RATE DURING TWO WAR PERIODS

	1914 - 1918			1939 - 1943		
Infant Mortality:	Births 4,001 Deaths 538	=	134.4 per 1,000 births registered	Births 2,895 Deaths 153	=	55.9 per 1,000 births registered
Tuberculosis (Pulmonary)	Cases 211 Deaths 166	=	78.7	Cases 224 Deaths 115	=	51.3
Tuberculosis (Other)	Cases 123 Deaths 89	=	72.3	Cases 55 Deaths 21	=	38.1
Diphtheria	Cases 81 Deaths 9	=	11.1	Cases 650 Deaths 36	=	5.5
Infectious Diseases (other than Diphtheria & T.B.)	Cases 2,166 Deaths 156		7.2	Cases 3,082 Deaths 124	=	4.0

Thus, during the existing war, there has been a general lowered death rate among infants and among the Infectious Diseases. Note the lowered birth rate (of 1,106) during the five years 1939-43 against the previous five years - an average annual diminution of births of 221.

TABLE X

CANCER DEATHS - 1914 - 1943

MALE	FEMALE	TOTAL	YEAR
		18	1914
		20	5
		32	6
16	11	27	7
8	17	25	8
11	[illegible]	29	9
11	[illegible]	32	1920
13	[illegible]	29	1
27	29	56	2
7	18	25	3
12	[illegible]	28	4
13	[illegible]	30	5
20	18	38	6
18	17	35	7
20	22	42	8
13	29	42	9
17	21	38	1930
13	27	40	1
22	27	49	2
19	22	41	3
24	24	48	4
22	23	45	5
25	19	44	6
23	[illegible]	47	7
20	[illegible]	41	8
20 Average	23	Average 43 X	9
20	[illegible]	" 43 X	1940
19	[illegible]	40	1
23	[illegible]	50	2
30	20	50	3

X = The exact figures for these years unobtainable. Taking an average of 10 years previous, it works out at 43.

TABLE XI

BLYTH BIRTH AND CHIEF DEATH RATES COMPARED WITH THE PRINCIPAL COUNTY RATES DURING TEN YEARS. THE CORRESPONDING RATES FOR ENGLAND AND WALES ARE GIVEN FOR COMPARISON:-

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
Live Birth rate (per 1,000 living) Administrative county.	15.94	15.42	15.48	15.53	15.26	15.16	15.00	14.80	15.00	15.07	–	–
England and Wales	15.3	14.4	14.8	14.7	14.8	14.9	15.1	15.0	14.6	14.2	–	–
Blyth	18.6	18.1	17.7	18.7	17.4	16.3	19.9	17.87	18.05	19.3	17.6	18.1
General death rate (per 1,000 living)												
Administrative county	11.33	11.93	11.78	11.62	12.02	12.67	11.76	11.84	12.44	12.84	–	–
England and Wales	12.0	12.3	11.8	11.7	12.1	12.4	11.6	12.1	14.3	12.9	–	–
Blyth	10.6	12.7	11.2	12.6	11.8	12.06	13.69	11.56	14.29	13.18	11.8	11.9
Infant Mortality rate (per 1,000 births)												
Administrative County	67	71	69	71	70	66	65	55	59	74	–	–
England and Wales	65	64	59	57	59	58	63	50	55	57	–	–
Blyth	42	74	70	79	89	70	63	48	64	89	52	52
Death rate from Respiratory Tuberculosis (per 1,000 living)												
Administrative County	0.68	0.65	0.60	0.53	0.55	0.54	0.40	0.52	0.55	0.51	–	–
England and Wales	0.69	0.69	0.63	0.60	0.58	0.58	0.53	0.53	0.58	0.60	–	–
Blyth	0.47	0.50	0.56	0.55	0.81	0.46	0.58	0.69	0.89	0.51	0.48	0.57

TABLE XII

HOUSING ACT, 1936 - PART IV, OVERCROWDING.

A. (i)	Number of dwellings overcrowded at end of year	359
(ii)	" " families dwelling therein	359
(iii)	" " persons " "	2,134
B.	Number of new cases of overcrowding reported during the year	55
C. (i)	Number of cases of overcrowding relieved during the year	80
(ii)	Number of persons concerned in such cases	473
(iii)	" " cases of overcrowding relieved in houses owned by the Local Authority (included in C (i)	11
(iv)	" " cases of overcrowding relieved in the course of Slum Clearance operations	NIL
D.	Particulars of any cases in which dwelling houses have <u>again</u> become overcrowded after the Local Authority have taken steps for the abatement of overcrowding	NIL

E. Any other particulars with respect to overcrowding conditions, upon which the Medical Officer of Health may consider it desirable to report:-

Where Holdings are situated	No. of Holdings	No. of O/C Holdings	O/C Percentage of Total No. of Holdings	O/C Percentage of No. of Holdings in each area.
In Municipal Houses	1,867	50	.54	2.68
In Areas scheduled for clearance	962	127	1.36	13.20
In Houses other than the above	6,503	182	1.95	2.80
TOTALS	9,332	359	3.85	-

O/C = Overcrowded.

OVERCROWDING SURVEY - " HOUSING ACT", 1936 TABLE XIII 1943

A. WARD:	BEBSIDE B		CROFT C		DELAVAL D		PLESSEY P		RIDLEY R		WATERLOO W		WHOLE BOROUGH WITHOUT COUNCIL HOUSES OR CLEARANCE AREAS		ALL COUNCIL HOUSES IN BOROUGH		WHOLE BOROUGH	
	Holdings	%	Holdings	%	Holdings	%	Holdings	%	Holdings	%	Holdings	%	Holdings	%	Holdings	%	Holdings	%
O/C	32	5.77	55	4.39	8	2.56	25	2.75	25	1.42	37	2.16	182	2.80				
U/C	522	94.23	1198	95.61	307	97.44	884	97.25	1737	98.58	1673	97.84	6321	97.20				
TOTAL	554	100%	1253	100%	315	100%	909	100%	1762	100%	1710	100%	6503	100%				
B.	B.S.		C.S.		D.S.		P.S.		R.S.		W.S.		ALL CLEARANCE AREA HOLDINGS IN BOROUGH.					
O/C	37	11.08	23	14.94	8	10.14	27	21.41	18	13.43	14	9.72	127	13.20				
U/C	297	88.92	131	85.06	62	89.86	99	78.59	116	86.57	130	90.28	835	86.80				
TOTAL	334	100%	154	100%	70	100%	126	100%	134	100%	144	100%	962	100%				
C.	B.M.		C.M.		D.M.		P.M.		R.M.		W.M.							
O/C	2	4.88	18	4.94	-	-	30	2.79	-	-	-	-	-	-	50	2.68		
U/C	39	95.12	346	95.06	383	100.00	1044	97.21	-	-	5	100.00	-	-	1817	97.32		
TOTAL	41	100%	364	100%	383	100%	1074	100%	-	-	5	100%	-	-	1867	100%		
D.	Whole Ward		Whole Ward		Whole Ward		Whole Ward		Whole Ward		Whole Ward		WHOLE BOROUGH WITHOUT COUNCIL HOUSES SUM	TOTAL	SUM	TOTAL	SUM	TOTAL
O/C	71	7.64	96	5.53	16	2.08	82	3.88	43	2.25	51	2.74	309	4.01	50	2.68	359	3.85
U/C	858	92.36	1675	94.47	752	97.92	2027	96.12	1853	97.75	1808	97.26	7156	95.99	1817	97.32	8973	96.15
TOTAL	929	100%	1771	100%	768	100%	2109	100%	1896	100%	1859	100%	7465	100%	1867	100%	9332	100%

Families housed at minimum standard = 353

KEY.- O/C = Overcrowded; U/C = Uncrowded.
B.S.= Bebside Slum; B.M.= Bebside Municipal.

TABLE XIV

REPORT ON OVERCROWDING SURVEY - BOROUGH OF BLYTH, 1943

A.

FAMILIES	Number of Families containing the equivalent number of persons shown at the head of each column													Total	Over-Crowded	% Over-Crowded	Borderline Cases.
No. of units	Up to 1	1½ and 2	2½ and 3	3½ and 4	4½ and 5	5½ and 6	6½ and 7	7½ and 8	8½ and 9	9½ and 10	10½ and 11	11½ and 12	12½ and over				
Total Families	701	2522	2889	1752	856	376	157	50	17	5	4	3	-	9,332			
No. of Overcrowded families in the previous line	-	-	17	110	59	87	53	20	10	3	-	-	-		359	3.85%	353

B. DWELLINGS.

	Number of dwellings with the "Permitted Number" shown at the head of each column.																
Permitted Number	1	1½ and 2	2½ and 3	3½ and 4	4½ and 5	5½ and 6	6½ and 7	7½ and 8	8½ and 9	9½ and 10	10½ and 11	11½ and 12	12½ and over				
Total Dwellings	1	146	1127	79	3157	949	383	1336	715	340	238	70	191	9,332			
No. of overcrowded dwellings in the previous line	-	17	173	1	112	34	16	4	2	-	-	-	-		359		Each holding constitutes a " Dwelling "

"Persons" means "Units"
i.e. - Adults = 1 Unit
Children under 10 years of age = ½ "
Children under 12 months not counted.

C. Table showing Overcrowding figures for successive years.

Year	No. Overcrowded	% Overcrowded
1935	985	10.99
1936	867	9.14
1937	564	5.93
1938	489	5.12
1939	378	3.93
1940	322	3.35
1941	420	4.47
1942	384	4.12
1943	359	3.85

TABLE XV

VACCINATIONS

For the years 1932 to 1943 inclusive.

1932	99
1933	90
1934	78
1935	115
1936	110
1937	84
1938	102
1939	85
1940	191
1941	98
1942	144
1943	157

The increase in the number done in 1940 was due to the vaccination of children who were being evacuated abroad. Dr. Gallacher was Public Vaccinator until his death in July 1942, when Dr. Milne was appointed.

TABLE XVI

DILSTON HALL MATERNITY SCHEME

By Council Minute 1111/1940 , the following scale of charges were agreed to:-

1. Wives of men serving in a non-commissioned capacity with His Majesty's Forces, and Merchant Navy will have the whole of their maintenance (5/- per day) in Dilston Hall Maternity Home paid by the Corporation.

2. The acceptance of the scale of charges fixed according to the following provisions:-
(a) Family of 2 dependents (Man and Wife) with net income of 45/- per week pays to the Corporation 1/- per day for each day the patient is in Dilston Hall.
(b) For every increase of 5/- per week in the net income, a further 6d. per day is payable to the Corporation.
(c) The Income scale is raised 5/- per week for each additional family dependent.

3. Ambulance charges = 35/- per person to be refunded by patient according to income scale. (Miners' wives are allowed to use the Colliery Ambulance free, providing that their husbands are Subscribers to the Colliery Ambulance Scheme).

The ambulance charge is similar to the charge made for maintenance for one week.

Weekly Net income	Number in Family dependent on income (per wk.) excluding the child to be born.						
	2	3	4	5	6	7	8
45 /-	7/-	-	-	-	-	-	-
50 /-	10/-6	7/-	-	-	-	-	-
55/-	14/-	10/6	7/-	-	-	-	-
60/-	17/6	14/-	10/6	7/-	-	-	-
65/-	21/-	17/6	14/-	10/6	7/-	-	-
70/-	24/6	21/-	17/6	14/-	10/6	7/-	-
75/-	28/-	24/6	21/-	17/6	14/-	10/6	7/-
80/-	31/6	28/-	24/6	21/-	17/6	14/-	10/6
85/-	35/-	31/6	28/-	24/6	21/-	17/6	14/-
90/-	"	35/-	31/6	28/-	24/6	21/-	17/6
95/-	"	"	35/-	31/6	28/-	24/6	21/-
100/-	"	"	"	35/-	31/6	28/-	24/6
105/-	"	"	"	"	35/-	31/6	28/-
110 /-	"	"	"	"	"	35/-	31/6
115/-	"	"	"	"	"	"	35/-